An Adaptive Targeted Field Experiment: Job Search Assistance for Refugees in Jordan

Online Appendix

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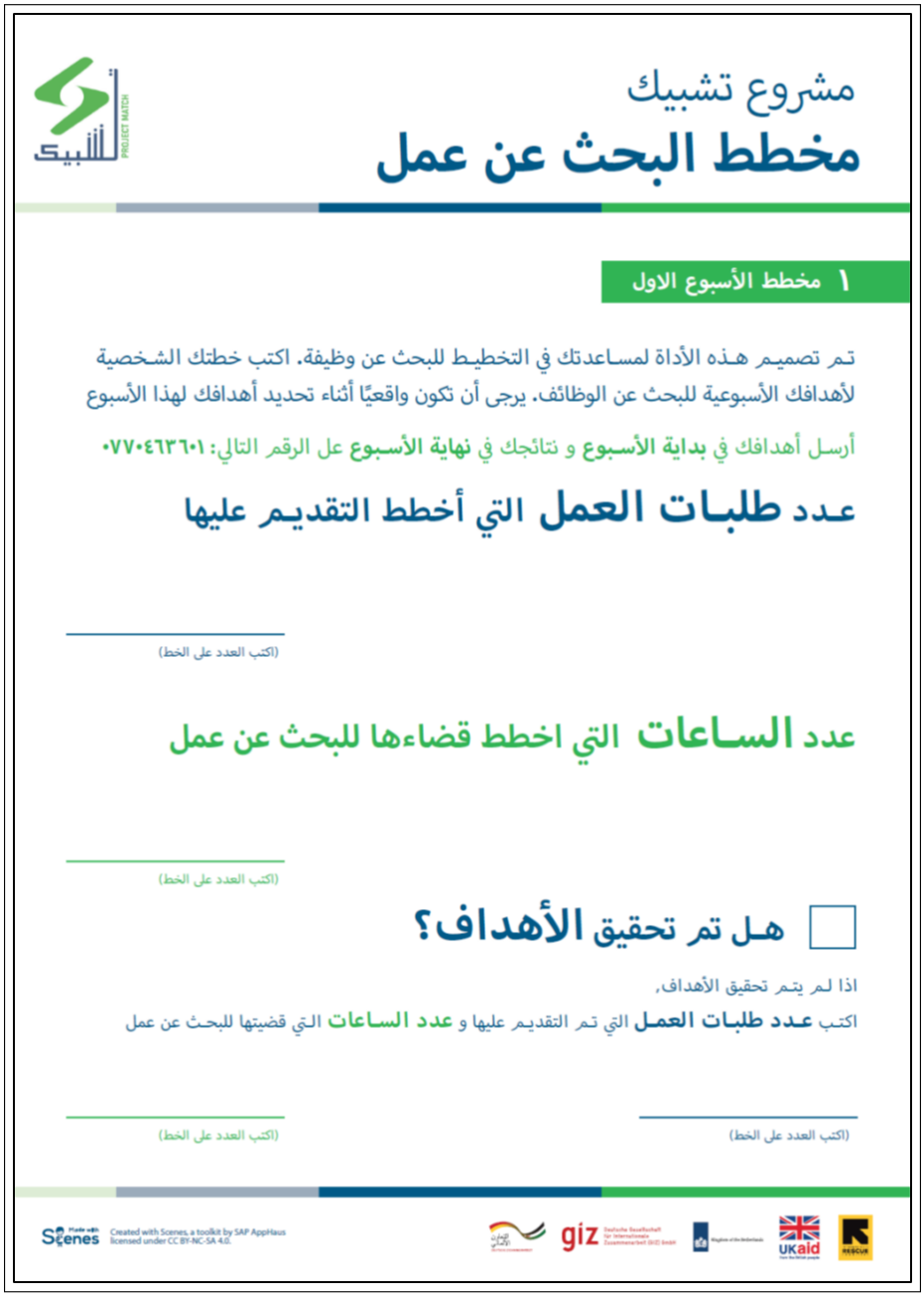
A.3. Treatment materials

FIGURE A.1. **Treatment paper tool: Interview preparation skills**

FIGURE A.2. **Treatment paper tool: Legal rights**

FIGURE A.3. **Treatment paper tool: Job search planning**



A.4. Additional tables

TABLE A.2. **Sampling methods by nationality**

	Jordanian		Syrian	
Sampling method	Number	Percentage	Number	Percentage
Referral	662	31%	577	35%
Community-based Organization	753	36%	360	22%
Home visit	167	8%	420	25%
Social media	101	5%	29	2%
UNHCR visit	3	0%	95	6%
IRC office visit	405	19%	178	11%
Other	16	1%	4	0%
Total	2107		1663	

TABLE A.3. **Balance at baseline**

	Mean and st. dev.				N	Imbalance (p)
	Control	Cash	Info	Psych.		
Age	28.54	28.94	29.10	28.79	3770	0.78
	(7.80)	(7.64)	(7.81)	(7.60)		
Household head	0.30	0.27	0.25	0.27	3770	0.85
	(0.46)	(0.44)	(0.43)	(0.45)		
Household size	4.94	4.92	4.89	4.77	3708	0.75
	(2.37)	(2.32)	(3.20)	(2.34)		
Educaton (years)	10.23	9.75	10.76	10.27	3770	0.44
	(4.35)	(4.18)	(8.50)	(4.01)		
Wage employed	0.03	0.02	0.03	0.01	3770	0.35
	(0.16)	(0.13)	(0.16)	(0.12)		
Work experience (if ever employed)	4.62	4.61	4.42	4.28	1737	0.72
	(4.30)	(4.48)	(4.65)	(4.17)		
Monthly HH Expenditure (JOD)	389.33	396.03	410.41	391.18	3770	0.20
	(170.65)	(209.60)	(195.62)	(178.45)		
Searched for work	0.49	0.44	0.44	0.44	3765	0.17
	(0.50)	(0.50)	(0.50)	(0.50)		
Applications (no.)	2.14	2.06	1.63	1.77	3672	0.14
	(4.95)	(5.15)	(4.01)	(4.57)		
Hours search	3.31	2.95	3.01	3.23	3560	0.87
	(5.35)	(5.21)	(5.56)	(5.78)		
Money spent (if searching)	8.31	7.91	7.96	7.87	1466	0.76
	(10.74)	(9.20)	(9.13)	(9.78)		

Note: This table reports descriptive statistics by treatment condition and an overall test of balance. Tho construct this test, we regress each covariates on the treatment dummies (with strata weights and robust standard errors) and then test the null hypothesis that all treatment coefficients are equal to zero.

TABLE A.4. **Attrition: full sample**

	Rapid-response	ESO (2 months)	ESO (4 months)
Cash	-0.001	-0.003 (0.637)	0.006 (0.258)
Information	0.005	0.009 (0.069)	0.016 (0.072)
Nudge	0.011	0.004 (0.212)	0.013 (0.118)
Control mean	0.012	0.020	0.048
Observations	3770	3770	3770

Note: This table reports the regressions of attrition on treatment for the full sample. Next to each treatment effect estimate, we report a randomization inference p-value. We only compute randomization inference p-values for observations that did not attrite in the rapid follow-up survey. This implies that we do not report p-values for impacts on attrition in the rapid follow-up survey. Further, for consistency, the coefficients in columns (2) and (3) are calculated for the restricted sample for which we calculate p-values. The control mean value of attrition reported in the last row always refers to the unrestricted sample.

TABLE A.5. **Attrition: Syrian sample**

	Rapid-response	ESO (2 months)	ESO (4 months)
Cash	0.007	-0.004 (0.671)	0.007 (0.303)
Information	0.013	0.006 (0.203)	0.018 (0.110)
Nudge	0.009	0.010 (0.076)	0.031 (0.016)
Control mean	0.005	0.010	0.026
Observations	1663	1663	1663

Note: This table reports the regressions of attrition on treatment for the Syrian refugee sample. Next to each treatment effect estimate, we report a randomization inference p-value. We only compute randomization inference p-values for observations that did not attrite in the rapid follow-up survey. This implies that we do not report p-values for impacts on attrition in the rapid follow-up survey. Further, for consistency, the coefficients in columns (2) and (3) are calculated for the restricted sample for which we calculate p-values. The control mean value of attrition reported in the last row always refers to the unrestricted sample.

TABLE A.6. **Attrition: Jordanian sample**

	Rapid-response	ESO (2 months)	ESO (4 months)
Cash	-0.005	-0.002 (0.579)	0.006 (0.343)
Information	-0.001	0.011 (0.106)	0.015 (0.183)
Nudge	0.012	-0.001 (0.523)	-0.002 (0.568)
Control mean	0.017	0.028	0.065
Observations	2107	2107	2107

Note: This table reports the regressions of attrition on treatment for the Jordanian sample. Next to each treatment effect estimate, we report a randomization inference p-value. We only compute randomization inference p-values for observations that did not attrite in the rapid follow-up survey. This implies that we do not report p-values for impacts on attrition in the rapid follow-up survey. Further, for consistency, the coefficients in columns (2) and (3) are calculated for the restricted sample for which we calculate p-values. The control mean value of attrition reported in the last row always refers to the unrestricted sample.

TABLE A.7. **Observations by stratum and treatment**

	Cash	Information	Nudge	Control
Syr, M, < HS, never emp	51	35	61	58
Syr, M, < HS, ever emp	86	75	102	152
Syr, M, >= HS, never emp	3	3	3	4
Syr, M, >= HS, ever emp	4	2	11	12
Syr, F, < HS, never emp	244	111	151	156
Syr, F, < HS, ever emp	61	32	89	89
Syr, F, >= HS, never emp	10	5	10	9
Syr, F, >= HS, ever emp	3	3	5	5
Jor, M, < HS, never emp	47	44	44	106
Jor, M, < HS, ever emp	40	90	120	110
Jor, M, >= HS, never emp	18	23	12	9
Jor, M, >= HS, ever emp	47	23	27	65
Jor, F, < HS, never emp	101	193	153	117
Jor, F, < HS, ever emp	65	68	78	54
Jor, F, >= HS, never emp	58	52	60	48
Jor, F, >= HS, ever emp	22	23	87	60

TABLE A.8. **Successes by stratum and treatment**

	Cash	Information	Nudge	Control
Syr, M, < HS, never emp	2	0	2	2
Syr, M, < HS, ever emp	6	3	6	9
Syr, M, >= HS, never emp	1	0	0	1
Syr, M, >= HS, ever emp	0	0	1	1
Syr, F, < HS, never emp	6	2	1	0
Syr, F, < HS, ever emp	1	1	3	2
Syr, F, >= HS, never emp	1	0	1	0
Syr, F, >= HS, ever emp	0	0	0	0
Jor, M, < HS, never emp	2	1	3	8
Jor, M, < HS, ever emp	4	9	13	13
Jor, M, >= HS, never emp	3	4	1	0
Jor, M, >= HS, ever emp	4	2	1	6
Jor, F, < HS, never emp	2	9	8	4
Jor, F, < HS, ever emp	9	8	4	4
Jor, F, >= HS, never emp	5	2	1	3
Jor, F, >= HS, ever emp	0	0	13	3

Note: The table reports results for wage employment at the time of the rapid follow-up interview.

TABLE A.9. **Success rates by stratum and treatment**

	Cash	Information	Nudge	Control
Syr, M, < HS, never emp	0.04	0.00	0.03	0.03
Syr, M, < HS, ever emp	0.07	0.04	0.06	0.06
Syr, M, >= HS, never emp	0.33	0.00	0.00	0.25
Syr, M, >= HS, ever emp	0.00	0.00	0.09	0.08
Syr, F, < HS, never emp	0.02	0.02	0.01	0.00
Syr, F, < HS, ever emp	0.02	0.03	0.03	0.02
Syr, F, >= HS, never emp	0.10	0.00	0.10	0.00
Syr, F, >= HS, ever emp	0.00	0.00	0.00	0.00
Jor, M, < HS, never emp	0.04	0.02	0.07	0.08
Jor, M, < HS, ever emp	0.10	0.10	0.11	0.12
Jor, M, >= HS, never emp	0.17	0.17	0.08	0.00
Jor, M, >= HS, ever emp	0.09	0.09	0.04	0.09
Jor, F, < HS, never emp	0.02	0.05	0.05	0.03
Jor, F, < HS, ever emp	0.14	0.12	0.05	0.07
Jor, F, >= HS, never emp	0.09	0.04	0.02	0.06
Jor, F, >= HS, ever emp	0.00	0.00	0.15	0.05

Note: The table reports results for wage employment at the time of the rapid follow-up interview.

TABLE A.10. **Weighted mean differences in employment by covariates, with randomisation inference p-values**

Subgroup	Treatment	Success rate	Δ	P-value
Female	Cash		0.010	0.211
Female	Information		0.005	0.342
Female	Nudge		0.011	0.201
Female	Control	0.031		
Male	Cash		-0.001	0.501
Male	Information		-0.020	0.857
Male	Nudge		-0.009	0.676
Male	Control	0.077		
Jordanian	Cash		-0.001	0.531
Jordanian	Information		-0.006	0.648
Jordanian	Nudge		0.002	0.463
Jordanian	Control	0.068		
Syrian	Cash		0.013	0.123
Syrian	Information		-0.004	0.626
Syrian	Nudge		0.005	0.348
Syrian	Control	0.027		
No high school	Cash		0.005	0.329
No high school	Information		-0.002	0.574
No high school	Nudge		0.002	0.428
No high school	Control	0.046		
High school	Cash		0.009	0.387
High school	Information		-0.015	0.723
High school	Nudge		0.007	0.405
High school	Control	0.061		
Never employed	Cash		0.011	0.206
Never employed	Information		-0.001	0.514
Never employed	Nudge		0.004	0.402
Never employed	Control	0.031		
Ever employed	Cash		0.000	0.501
Ever employed	Information		-0.010	0.730
Ever employed	Nudge		0.003	0.445
Ever employed	Control	0.071		

Note: The table reports results for wage employment at the time of the rapid follow-up interview. Δ is the difference between weighted mean employment in a given treatment group and in the control group. p-values obtained with the randomization inference procedure discussed in the paper.

TABLE A.11. **Probability treatment is optimal, by stratum**

Stratum	Cash	Information	Nudge	Control
Syr, M, < HS, never emp	0.38	0.09	0.29	0.24
Syr, M, < HS, ever emp	0.44	0.10	0.23	0.23
Syr, M, >= HS, never emp	0.42	0.12	0.12	0.34
Syr, M, >= HS, ever emp	0.24	0.20	0.26	0.30
Syr, F, < HS, never emp	0.45	0.33	0.19	0.03
Syr, F, < HS, ever emp	0.19	0.35	0.33	0.13
Syr, F, >= HS, never emp	0.41	0.16	0.29	0.14
Syr, F, >= HS, ever emp	0.32	0.23	0.23	0.22
Jor, M, < HS, never emp	0.18	0.06	0.29	0.46
Jor, M, < HS, ever emp	0.20	0.18	0.20	0.41
Jor, M, >= HS, never emp	0.41	0.45	0.09	0.05
Jor, M, >= HS, ever emp	0.31	0.24	0.08	0.36
Jor, F, < HS, never emp	0.08	0.29	0.48	0.15
Jor, F, < HS, ever emp	0.58	0.32	0.02	0.09
Jor, F, >= HS, never emp	0.58	0.10	0.04	0.27
Jor, F, >= HS, ever emp	0.04	0.02	0.89	0.05

TABLE A.12. **Main outcomes**

Outcome	Definition
Wage employment	A dummy for whether the respondent currently has a wage-paying job.
Earnings	Earnings from main wage job (0 if not in wage employment).
Well-being	An index that comprises (i) monthly expenditure, (ii) life satisfaction (0-10 scale), (iii) an indicator of negative affect (feeling anxious on previous day on a 0-10 scale), (iv) an indicator of positive affect (feeling happy on previous day on a 0-10 scale).
Social integration	An index of seven social integration questions (each question asks the respondent to report on a scale from 1 to 5 how much he or she agrees with a given statement, for example, 'I feel connected to Jordan').
Intends to migrate	A dummy for whether the respondent intends to migrate to a different country in next 12 months (this does not include return migration to Syria).

Note: All indices are constructed using the method outlined in Anderson (2008).

TABLE A.13. **Treatment effects after 2 months, full sample**

	Employed	Earnings	Well-being
Cash	0.020 (0.107)	2.405 (0.236)	0.065 (0.029)
Information	0.017 (0.121)	1.410 (0.341)	0.022 (0.259)
Nudge	0.013 (0.202)	0.957 (0.401)	0.012 (0.374)
Control mean	0.111	23.416	0.077
Observations	3593	3582	3593

TABLE A.14. **Treatment effects after 4 months, full sample**

	Employed	Earnings	Well-being
Cash	0.003 (0.420)	-1.167 (0.626)	0.057 (0.036)
Information	0.003 (0.404)	-0.298 (0.537)	0.024 (0.217)
Nudge	0.000 (0.521)	-1.444 (0.680)	0.046 (0.075)
Control mean	0.103	22.758	0.025
Observations	3478	3463	3478

TABLE A.15. **Treatment effects on employment for Syrians, after 2 months**

	Employed below 200 JOD	Employed above 200 JOD
Cash	0.033 (0.042)	0.019 (0.117)
Information	0.048 (0.007)	-0.002 (0.537)
Nudge	0.027 (0.077)	0.006 (0.354)
Control mean	0.043	0.048
Observations	1623	1608

TABLE A.16. **Treatment effects on self-employment and total income for Syrians**

	Self-employment		Total income	
	Month 2	Month 4	Month 2	Month 4
Cash	0.003	0.019	6.775	10.112
	(0.014)	(0.011)	(6.276)	(6.025)
Information	-0.012	-0.004	-1.247	8.789
	(0.015)	(0.010)	(6.919)	(7.070)
Nudge	-0.012	-0.003	2.107	3.628
	(0.014)	(0.009)	(6.202)	(5.818)
Control mean	0.05	0.02	50.63	45.06
Observations	1624	1624	1624	1624

Note: Standard errors in parentheses.

TABLE A.17. **Use of cash among Syrians**

	All	Above median expenditure	Below median expenditure
Job search	0.211	0.173	0.262
Food	0.528	0.508	0.570
Household expenses	0.423	0.387	0.481
Utilities	0.228	0.210	0.257
Medical expenses	0.083	0.105	0.061
Daycare	0.040	0.060	0.019
Debts	0.204	0.226	0.187

Note: This table presents respondents' reports on how the cash from the cash intervention was spent by Syrians. Each respondent was asked to consider each item on a prepared list of expenditure categories, and to report whether that was one of the main items on which he or she spent the cash. Respondents can report more than one category and hence answers do not need to sum up to 100 percent.

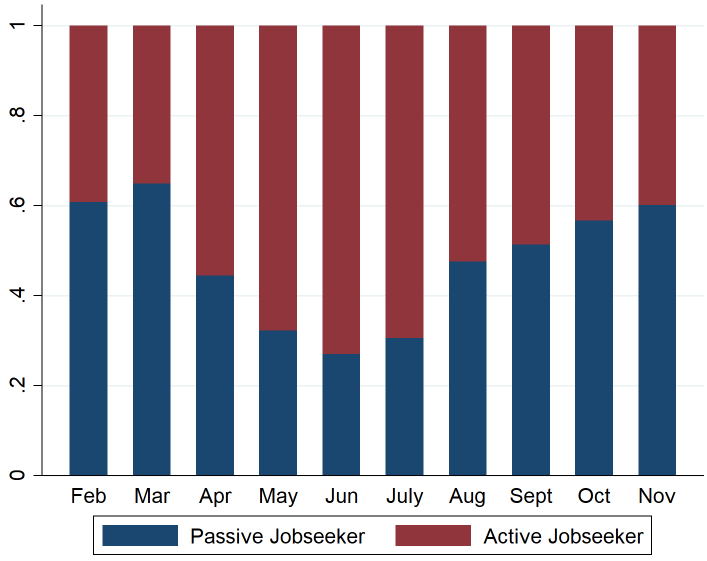
TABLE A.18. **Use of cash among Jordanians**

	All	Above median expenditure	Below median expenditure
Job search	0.342	0.364	0.337
Food	0.455	0.449	0.485
Household expenses	0.329	0.328	0.347
Utilities	0.156	0.106	0.214
Medical expenses	0.037	0.040	0.036
Daycare	0.027	0.015	0.041
Debts	0.166	0.141	0.199

Note: This table presents respondents' reports on how the cash from the cash intervention was spent by Jordanians. Each respondent was asked to consider each item on a prepared list of expenditure categories, and to report whether that was one of the main items on which he or she spent the cash. Respondents can report more than one category and hence answers do not need to sum up to 100 percent.

A.5. Additional figures

FIGURE A.4. **Active and passive sampling**



Note: This Figure reports the proportion of jobseekers selected through active and passive sampling.

FIGURE A.5. **Distribution of observations across strata**

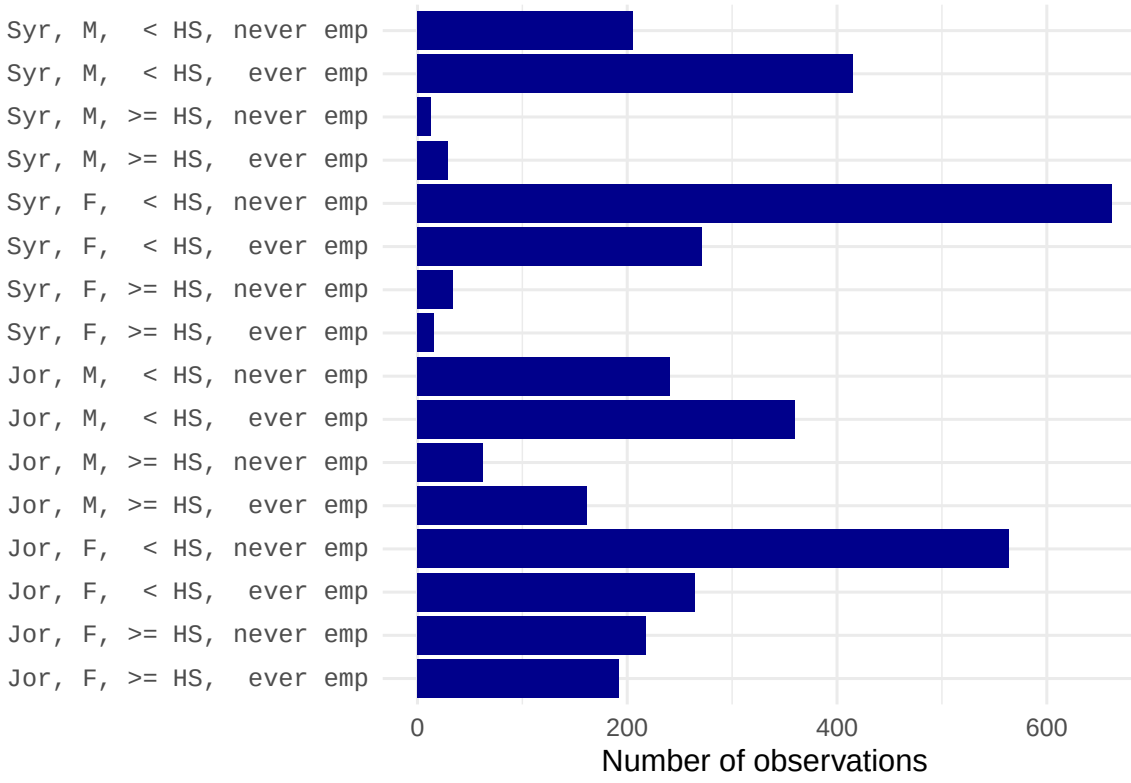


FIGURE A.6. **Observations by week**

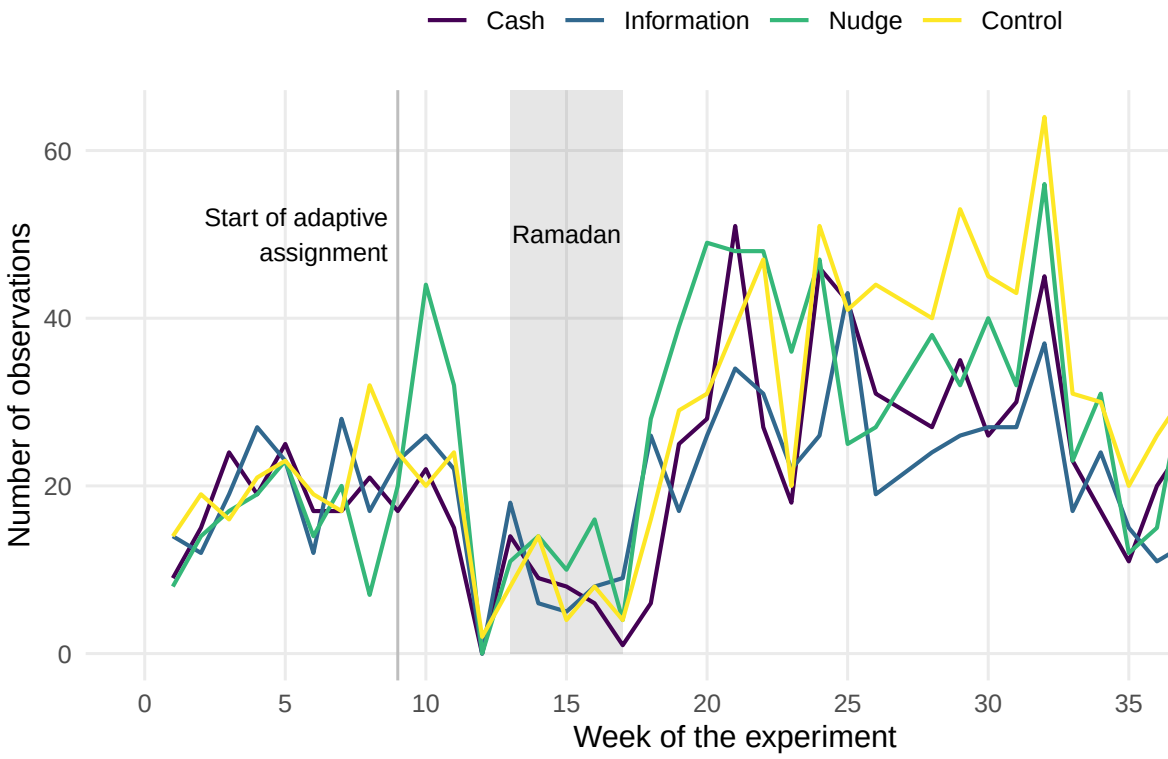


FIGURE A.7. **Employment rate by week of sampling**

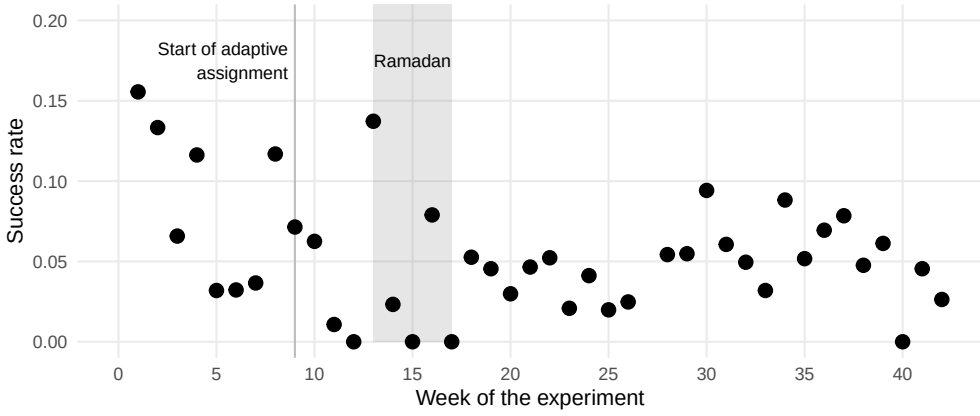


FIGURE A.8. **Credible sets for average potential outcomes, and for average treatment effects relative to the control treatment**

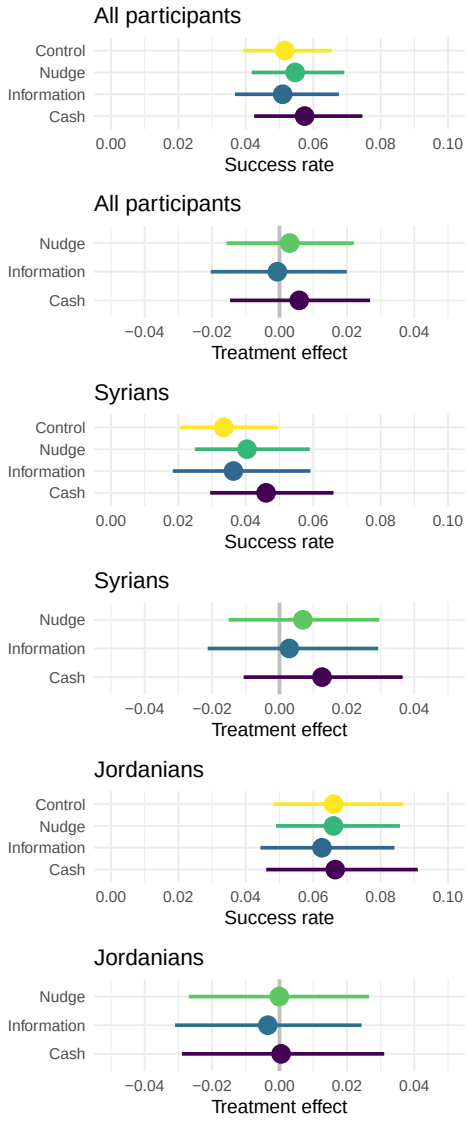


FIGURE A.9. **95% Credible sets for average potential outcomes across strata**

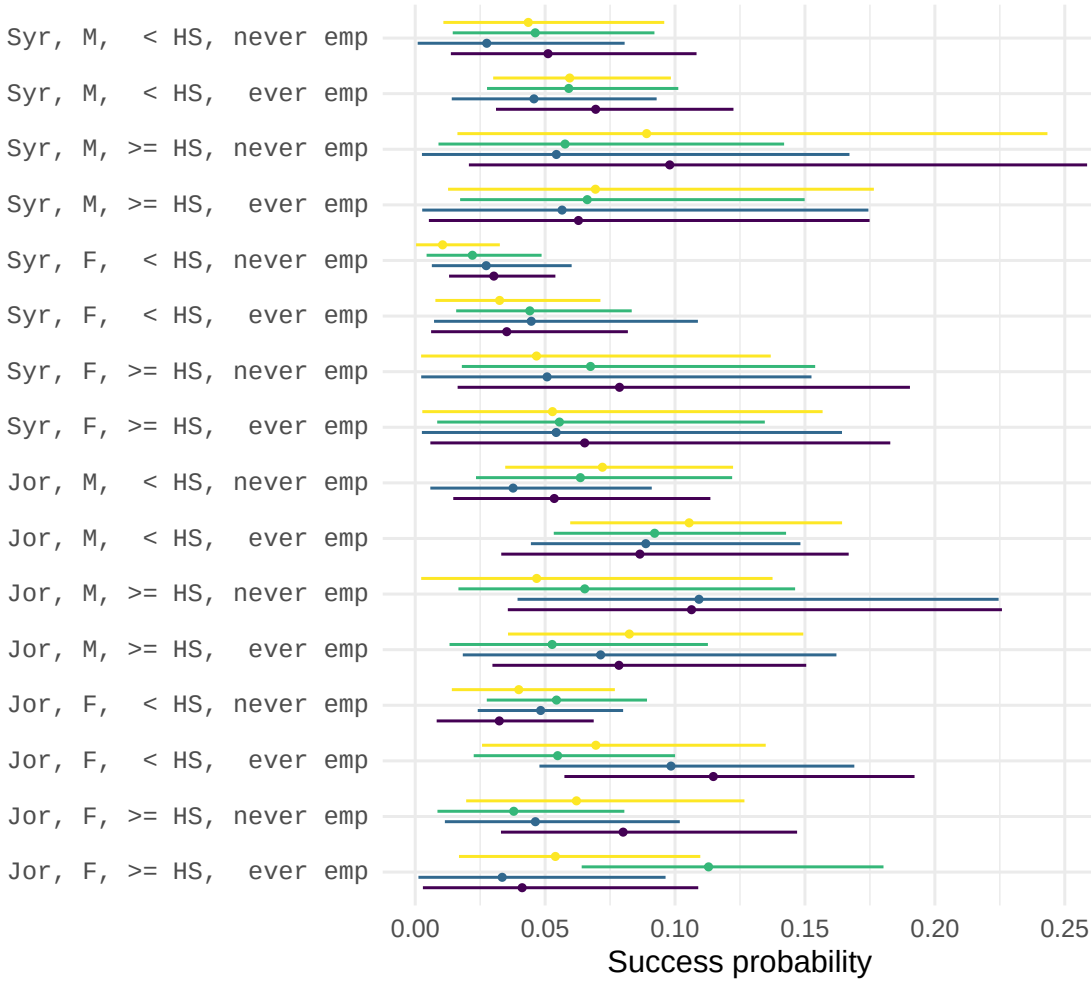
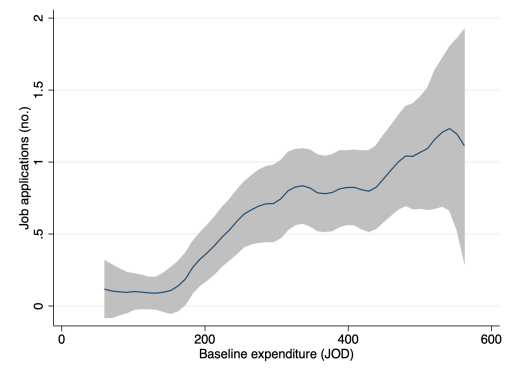


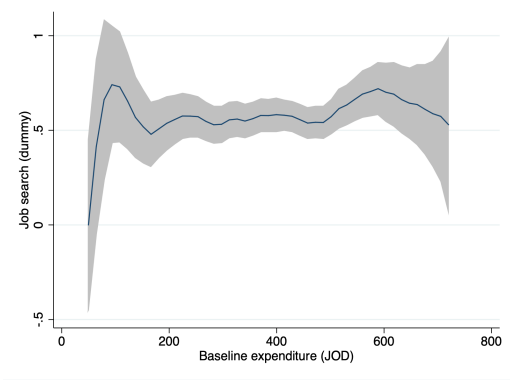
FIGURE A.10. **Job search and baseline expenditure (control Syrians)**

(A) Job search (dummy)

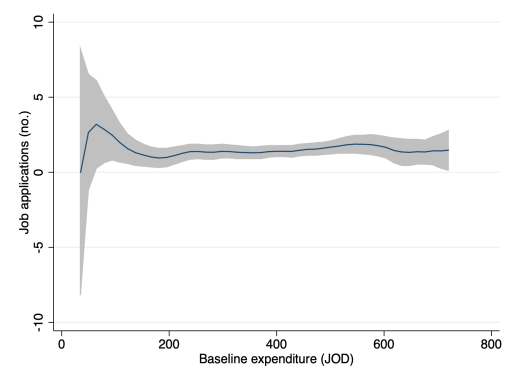


(B) Job applications (no.)

FIGURE A.11. **Job search and baseline expenditure (control Jordanians)**

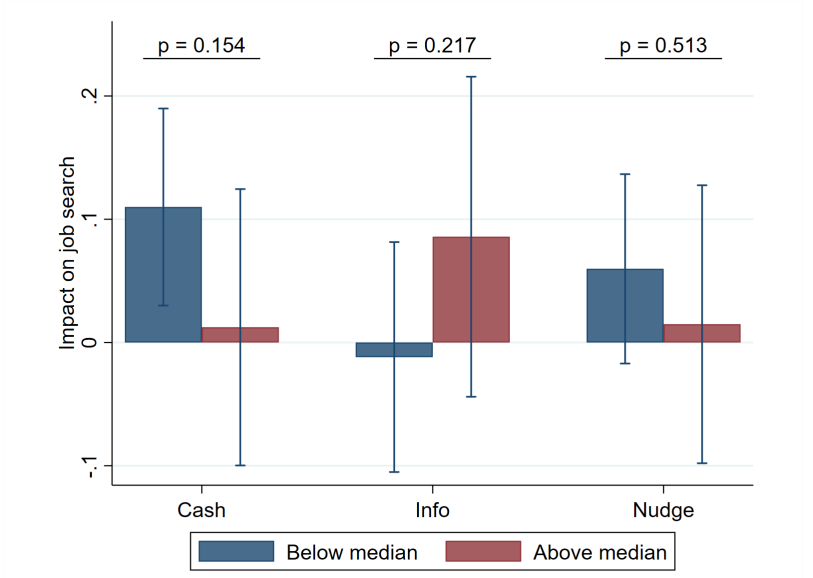


(A) Job search (dummy)



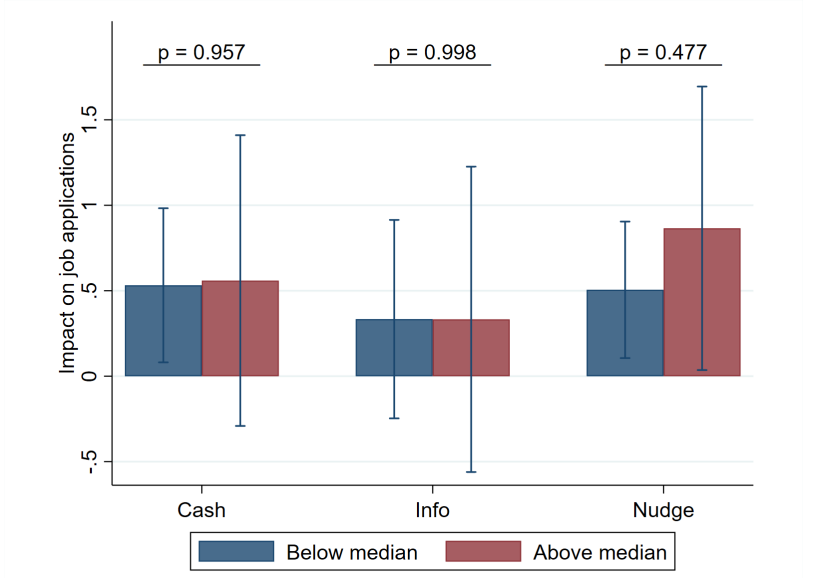
(B) Job applications (no.)

FIGURE A.12. **Treatment effects on job search by baseline expenditure (Syrians)**



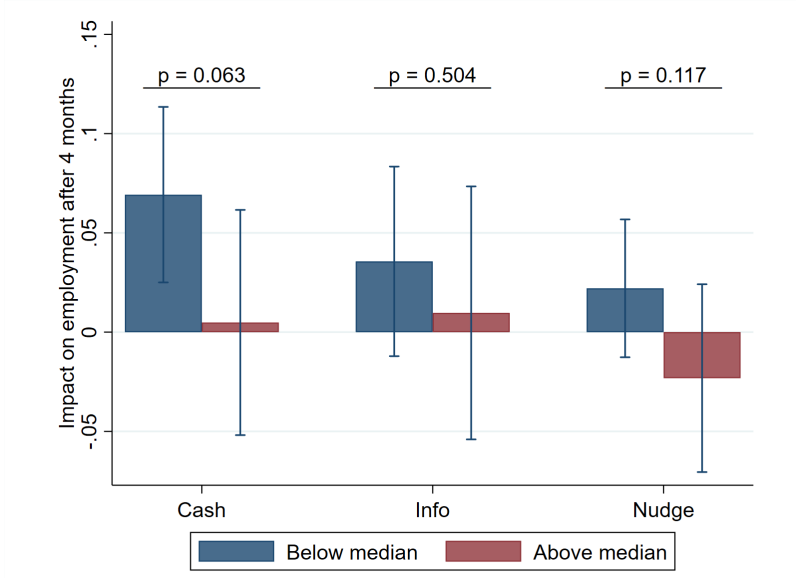
Note: This figure shows treatment effects and 90% confidence intervals by baseline expenditure. Above each pair of treatment effects, we also report a p-value for the test of the null hypothesis that the two coefficients are equal.

FIGURE A.13. **Treatment effects on applications by baseline expenditure (Syrians)**



Note: This figure shows treatment effects and 90% confidence intervals by baseline expenditure. Above each pair of treatment effects, we also report a p-value for the test of the null hypothesis that the two coefficients are equal.

FIGURE A.14. **Treatment effects on 4-month employment by baseline expenditure (Syrians)**



Note: This figure shows treatment effects and 90% confidence intervals by baseline expenditure. Above each pair of treatment effects, we also report a p-value for the test of the null hypothesis that the two coefficients are equal.

FIGURE A.15. **Simulated outcomes by group**

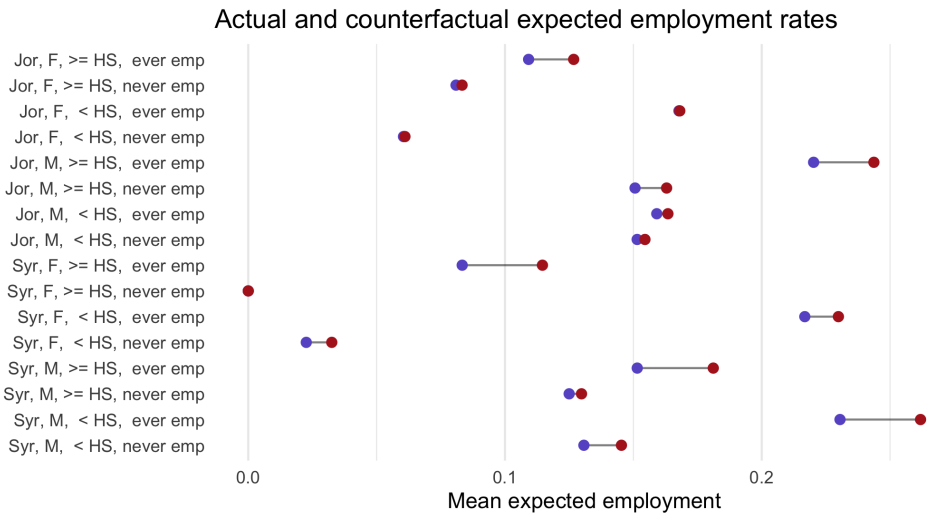
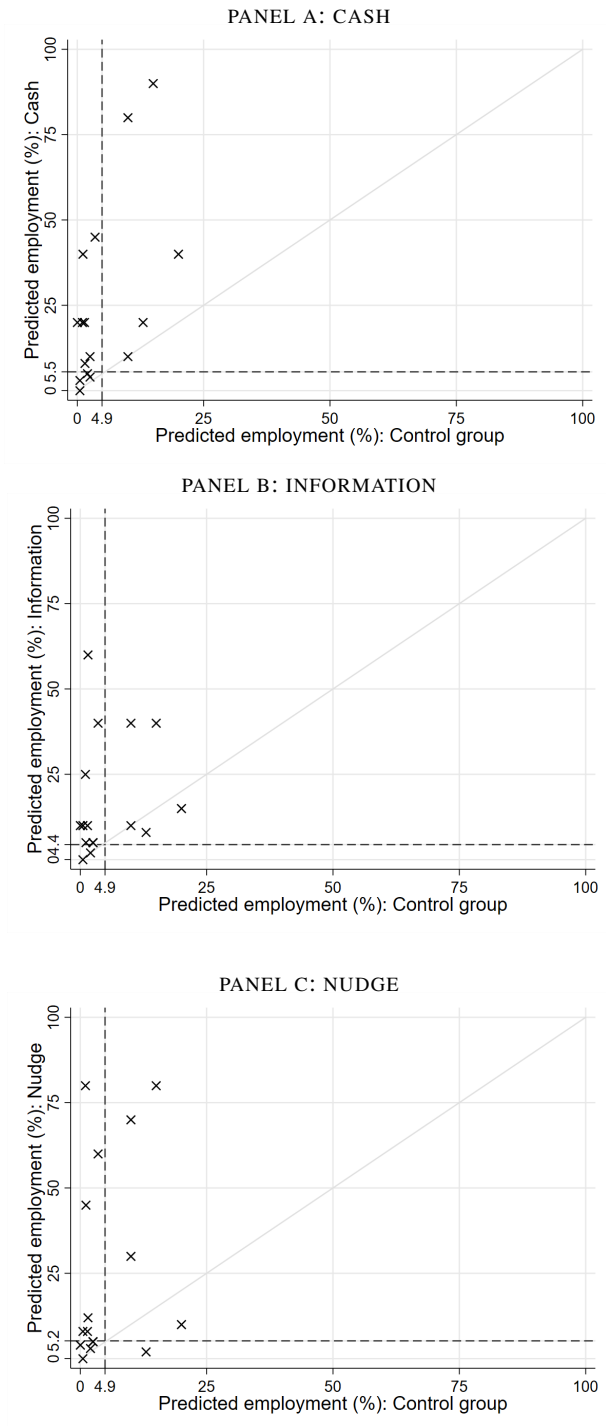
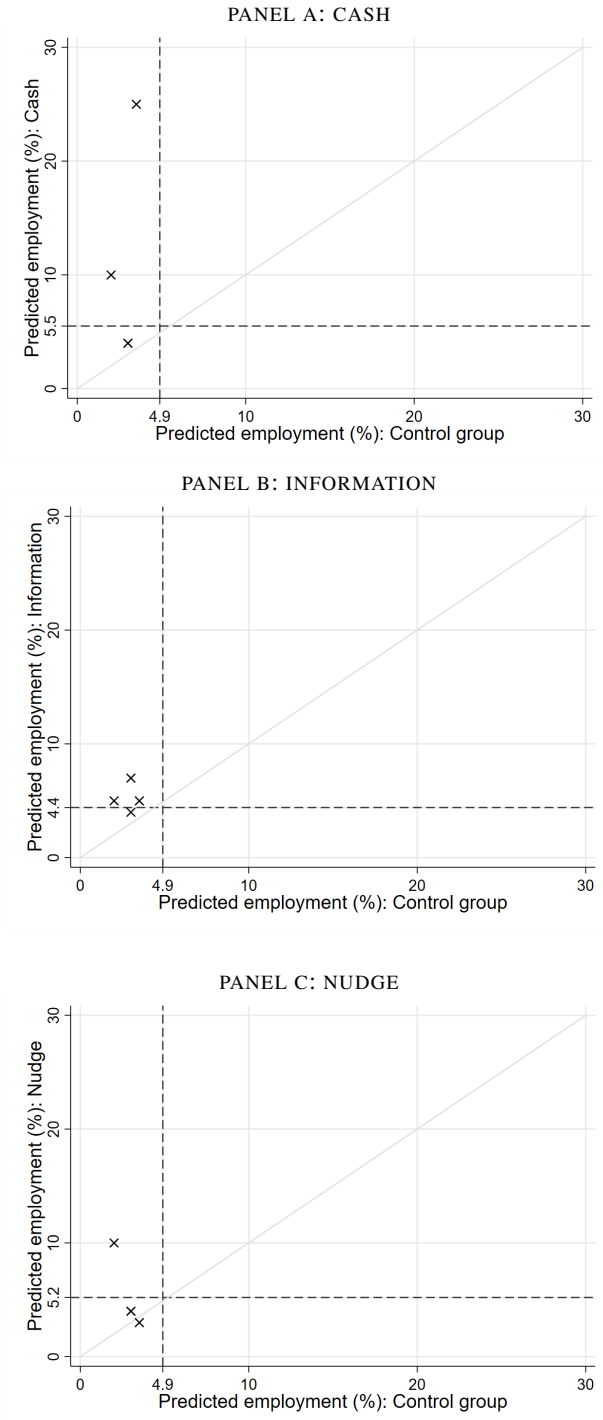


FIGURE A.16. **Forecast employment outcomes: Local staff**



Note: These scatterplots show IRC employees' incentivized forecasts of six-week employment rates under each of the three treatment arms; for each plot, we graph against the incentivized forecast of the six-week rate for the control group. On each plot, we superimpose the weighted average employment rates from Table A.10.

FIGURE A.17. **Forecast employment outcomes: Head-office staff**



Note: These scatterplots show IRC employees' incentivized forecasts of six-week employment rates under each of the three treatment arms; for each plot, we graph against the incentivized forecast of the six-week rate for the control group. On each plot, we superimpose the weighted average employment rates from Table A.10.

References

Anderson, Michael L (2008). "Multiple inference and gender differences in the effects of early intervention: A reevaluation of the Abecedarian, Perry Preschool, and Early Training Projects." *Journal of the American Statistical Association*, 103(484), 1481–1495.